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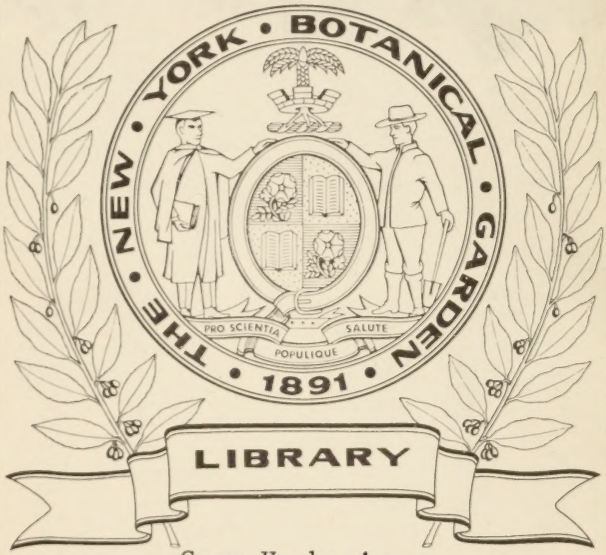

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SUPPLEMENT TO THE CATALOGUE OF ARKANSAS PLANTS

J. T. BUCHHOLZ and E. J. PALMER

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SUPPLEMENT TO THE CATALOGUE OF ARKANSAS PLANTS.*

J. T. Buchholz and E. J. Palmer.

More than thirty-six years have elapsed since the publication of a Catalogue of the Flora of Arkansas. We are presenting here the first supplement to the List of Arkansas Plants by Branner and Coville (35). Many plant names have been changed since this publication, but we are not attempting to include names in this list where mere changes in synonymy are involved, except in a few instances where these changes are such as would not be included with the synonymy given in current botanical manuals. Our supplementary list of plants presented here consists almost exclusively of additions to the former catalogue and includes also the species reported by various other botanists, both in publications appearing since 1890, and from reports rendered privately to the Department of Botany of the University of Arkansas within the last six years.

One or more collection numbers are given where possible. However, collections made by J. T. Buchholz were usually not numbered, and when thus marked, all numbers used by this observer are below 1000. Nearly all of these specimens are in the Herbarium of the University of Arkansas. Collection numbers of Arkansas plants by E. J. Palmer are those given with numbers above 4000, unless otherwise stated, and duplicate specimens of many of these plants are in the Herbarium at Fayetteville. Most of the early collections by Palmer

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are to be found in the Herbarium of the Missouri Botanical Garden, while a complete set of collections of all ligneous species with Palmer numbers is to be found in the Herbarium of the Arnold Arboretum.

The flora of Arkansas has been largely neglected by botanists during the last thirty-six years. Those who have collected within the State have usually been rewarded by the discovery of many new and rare species of plants. It is safe to predict that as this flora becomes better known very many more additions will be made, and with a more careful and critical study of the material many new species and varieties will be added.

The Catalogue of Plants by Branner and Coville (34) included 1610 ferns and seed plants. A small reduction must be made from this list for plants erroneously reported or those now represented under new names among our 534 additions. However, it may safely be estimated that the known ferns and seed plants of Arkansas now comprise about 2100 species.

The earliest naturalists to visit and report on the vegetation of the area included in this state, of which there are available records, were Bradbury (1) in 1809-11, Schoolcraft (2) in 1818-1819 and Nuttall in 1819. All of these early explorers gave valuable and interesting accounts of the geography and vegetation, but the celebrated botanist Nuttall described the vegetation in greatest detail and published valuable contributions including the descriptions of many new species of plants (4, 5, 7). Nuttall's Journal of Travels Into Arkansa Territory (3) is considered a classic in the literature of travel, and this together with his Collection Towards a Flora of the Territory of Arkansas (7), are noteworthy

contributions to the flora of the West. His Flora of Arkansas was never completed, but he mentioned many plants in his Journal of Travels, and described others in his Flora and other contributions (4, 5). The works of Bradbury, Schoolcraft and Nuttall constitute the earliest reliable records on the flora of Arkansas.

In 1834 Featherstonehaugh traveled through Missouri and Arkansas from the Missouri to the Red River. Though his report (6) was largely geological, he made frequent mention of many species of plants observed and the types of vegetation encountered.

In 1859 Professor Leo Lesquereux made a study of the fossil and recent flora of the state for the Second State Geological Survey, and gave a description of the botanical features of the northern and northwestern counties and a catalogue of Arkansas plants (8), including those observed and reported by Nuttall. As Lesquereux did his work during October-December and covered very extensive territory, he probably did not assemble an herbarium.

To this catalogue Butler added a list (9) of over a hundred species in 1877. Prof. F. L. Harvey published many short articles and notes in the Botanical Gazette (10-15, and 17-29) between 1880 and 1885, including a more comprehensive treatise on the Ferns of Arkansas (17-18) and one on the arboreal flora (32). Harvey began to assemble an herbarium. A large portion of his collection is still preserved at the University of Arkansas, and many of his duplicates were exchanged with other herbaria.

Professor R. Ellsworth Call, who was engaged in a study of the geology of Crowley's Ridge, prepared two

special reports on the native forest trees of this region (33, 37). He probably did not assemble any collections. J. Francis Williams made a special study of the timber of the Magnet Cove region (38) and reported a definite relation between the vegetation and the underlying igneous rocks, confirming a feature previously mentioned by Featherstonehaugh, but apparently not observed by Harvey (21).

In the Annual Report of the Arkansas Geological Survey for 1888 Branner and Coville (35) published the most recent comprehensive catalogue of Arkansas plants, a publication which appeared in 1891. This also included a discussion of the general botanical features of the state (35). Coville made some collections which are on deposit in the U. S. National Museum, but the bulk of the work done for the plant list seems to have been based on field notes. The Harvey collection at Fayetteville was worked over by Professor Simonds in preparing the Branner and Coville catalogue.

An extensive collection made by Mr. E. N. Plank, who lived at Decatur, Arkansas, for many years, was acquired by the New York Botanical Garden. The Plank collection contained many Arkansas plants, but he seems not to have published a list of these except in a single brief paper: "Concerning the Plants of Southwestern Arkansas" (41). The material collected by Plank and included in this report has been consulted at the herbarium of the New York Botanical Garden.

In an ecological study, Dr. S. M. Coulter, (43) recorded a number of swamp species new to Arkansas. Similarly Dr. Roland M. Harper (47-49) has made records of a number of species characteristic of our

prairie and the coastal plain region of southeastern Arkansas, containing names new to the state. More recently Dr. Harper and Rev. H. E. Wheeler sent us specimens representing unreported species, as credited to them. Others contributing data, specimens, or assistance in finding favorable collecting stations are: Mr. Ralph Shreve of Farmington, Prof. D. Demaree of Hendrix College, Conway; Mr. W. W. Ashe of the Forest Service; staff members of the Agricultural Experiment Station, Fayetteville; some of the county agricultural agents and a number of former students of the University of Arkansas. These miscellaneous unpublished records are included here with the name of the observer. From these, from some of our own publications, and for the most part from our other unpublished records, this list of additions to the catalogue of Arkansas plants has been prepared. A list of publications pertaining entirely or in part to the flora of Arkansas is given below. This is represented by a complete collection of these publications, nearly all bound in eight volumes deposited in the University of Arkansas Library.

PTERIDOPHYTA.

Polypodiaceae:

Polypodium virginianum L. (formerly reported as *P. vulgare* L.) Fayetteville, Washington Co.; Jasper, Newton Co.; Magazine Mountain, Logan Co., probably the southwestern limit of the species.

Pteridium aquilinum var. *pseudocaudatum* Clute. Savoy, Washington Co.

Pellaea glabella Mett. Bentonville (near Bella Vista), Benton Co.

Asplenium platyneuron forma *serratum* (E. S. Miller) R. Hoffman. On chert and limestone rocks, with the species.

Polystichum achrostichoides forma *incisum* (Gray) Gilbert. With typical form, chert hills, Northwest Arkansas.

Dryopteris spinulosa (Muell.) Kuntze. On north slope, Magazine Mountain, Logan Co. (D. M. Moore).

Woodsia scopulina D. C. Eaton. On sandstone ledges, north side of Magazine Mountain, Logan Co., near the summit.

Dennstaedtia punctilobula (Mich.) Moore. On partially shaded damp sandstone cliffs, north side of Magazine Mountain, Logan Co. 24142.

Ophioglossaceae:

Ophioglossum Engelmanni Prantl. 5376 Fulton, Hempstead Co., clay barrens; also in glades and rocky barrens of the Ozark region.

Botrychium obliquum var. *tenuifolium* (Underw.) Gilbert. 24008 McNab, Hempstead Co.

Botrychium obliquum var. *dissectum* (Spreng.) Clute. Farmington, Washington Co. Low woods, rare, occurs with the species.

Equisetaceae:

Equisetum hyemale var. *intermedium* Eat. fide J. H. Schaffner. On calcareous deposits near spring, Jasper, Newton Co.

Equisetum praealtum Raf. (*E. robustum* (A. Br.) A. A. Eaton.) Includes the plants formerly referred to *E. hyemale*. Along sandy river banks.

Isoetaceae:

Isoetes Butleri Engelm. Little Rock, on "Pulaskite," Fourche Mountain; Eureka Springs, Carroll Co. (Bush).

Isoetes melanopoda J. Gay. In springy ground, top of Magazine Mountain, Logan Co.; 24921 Hot Springs, Garland Co.; Farmington, Washington Co.

MONOCOTYLEDONAE.

Sparganiaceae:

Sparganium americanum Nutt. Prairie View, Washington Co.; 10598 Washington, Hempstead Co.; 8358 Ashdown, Little River Co.

Alismaceae:

Sagittaria longirostra (Micheli) J. G. Sm. Fayetteville, Washington Co.; 10599 Washington, Hempstead Co.

Sagittaria papillosa Buch. 25043 Hazen, Prairie Co.

Graminae:

Erianthus strictus Baldw. Fulton, Hempstead Co. (4386 Greenman).

Paspalum distichum L. Fulton, Hempstead Co. (4387 Greenman).

Paspalum circulare Nash. 6363 Beaver, Carroll Co.

Paspalum elatum L. C. Rich. Corning, Clay Co.

Paspalum laeviglume Scribn. 26210 Cotter, Baxter Co.

Paspalum Muhlenbergii Nash. 6093 Corning, Clay Co.; 6370 Beaver, Carroll Co.; 8175 Fayetteville, Washington Co.

Panicum Boscii Poir. 8426 Benton, Saline Co.

Panicum commutatum Schultes. 25015 Little Rock; 24880 Hot Springs, Garland Co.

Panicum Helleri Nash. Eureka Springs, Carroll Co.

Panicum huachucae Ashe. 24827 Magazine Mountain, Logan Co.

Panicum linearifolium Scribn. 5611 Eureka Springs, Carroll Co.; 25178 Shirley, Van Buren Co.

Panicum lucidum Ashe. 25169 Shirley, Van Buren Co.

Panicum mutabile Scribn. & Smith. 24872 Hot Springs, Garland Co.

Panicum polyanthes Schultes. 25053 Hazen, Prairie Co.

Panicum Scribnerianum Nash. 5558 Eureka Springs, Carroll Co.

Panicum tennesseense Ashe. Westfork, Washington Co.

Panicum Werneri Scribn. 5610 Eureka Springs, Carroll Co.; 25024 Hazen, Prairie Co.

Echinochloa colona (L.) Link. 26727 McNab, Hempstead Co.

Digitaria Ischaemum Schreb. (*Digitaria humifusa* Rydb.) 4564 Eureka Springs, Carroll Co.

Digitaria villosa (Walt.) Ell. Arkadelphia, Clark Co. (fide H. R. Rosen).

Axonopus furcatus (Fluegge) Hitchc. 10594 Washington, Hempstead Co.

Setaria viridis (L.) Beauv.

Holcus halepensis L. (*Sorgum halepense* Pers.) Naturalized in waste places and widely distributed.

Sporobolus canovirens Nash. 6908 Harrison, Boone Co.

Sporobolus cryptandrus (Torr.) Gray. 6055 Corning, Clay Co.

Sporobolus pilosus Vasey. 4374 Eureka Springs, Carroll Co.

Sporobolus vaginaeflorus Torr. Fide Standley and Hitchcock, from specimens by County Agr. Agent.

Agrostis Elliottiana Schultes. Central Arkansas, from District Agr. Agent.

Eragrostis glomerata (Walt.) Dewey. El Dorado, Union Co.

Bromus secalinus L. Warren, Bradley Co.

Bromus tectorum L. Fayetteville, Washington Co.

Sphenopholis pallens (Spreng.) Scribn. 25168 Shirley, Van Buren Co.

Glyceria septentrionalis Hitchc. 25046 Hazen, Prairie Co.

Elymus arkansanus Scribn. & Ball. North Arkansas, District Agr. Agent.

Elymus australis Scribn. & Ball. Fayetteville, Washington Co.; 8126 Benton, Saline Co.

Elymus glabriflorus (Vasey) Scribn. & Ball. Lake Village, Chicot Co.

Cyperaceae:

Cyperus compressus L. 14641 McNab, Hempstead Co.

Cyperus cylindricus (Ell.) Britton. Fulton, Hempstead Co. (fide J. M. Greenman).

Cyperus ferax Rich. 26747 Fulton, Hempstead Co.

Cyperus Houghtonii Torr. Fayetteville, Washington Co.

Cyperus hystricinus Fernald. 14657 McNab, Hempstead Co.

Cyperus lancastriensis Porter. 8124 Benton, Saline Co.

Cyperus pseudovegetus Steud. 6061, 8026 Fulton, Hempstead Co.

Cyperus rivularis Kunth. 4565 Eureka Springs, Carroll Co.

Cyperus speciosus var. *ferruginescens* (Boeckl.) Britton. Fayetteville, Washington Co.

Eleocharis Torreyana Boeckl. Lonoke Co.. woods of second bottoms.

Fimbristylis Baldwiniana Torr. Stuttgart, Arkansas Co. (H. R. Rosen). A troublesome weed of rice fields.

Fimbristylis castanea var. *puberula* (Michx.) Britton. 5531 Eureka Springs, Carroll Co.; Hazen, Prairie Co., and Stuttgart, Arkansas Co., where a troublesome weed in rice fields.

Fuirena hispida Ell. 8099 Gifford, Hot Springs Co.

Fuirena simplex Vahl. 6002 Cotter, Baxter Co.; 8370 Ashdown, Little River Co.

Scirpus debilis Pursh. Lonoke Co., Portland clays (rice land soil).

Rynchospora corniculata (Lam.) Gray. 8070 Arkadelphia, Clark Co.; 10520 Doddridge, Miller Co.

Rynchospora cymosa Ell. South Arkansas, District Agr. Agent.

Rynchospora gracilenta Gray. 8095 Gifford, Hot Springs Co.

Rynchospora macrostachya Torr. 6071 Corning, Clay Co.

Rynchospora Plankii Britton. Benton Co. (type locality); Washington Co.

Carex arkansana Bailey. Arkansas River Valley.

Carex Bicknellii Britton. 25060 Hazen, Prairie Co.

Carex cherokeensis Schwein. 27104a Conway, Faulkner Co.; Pulaski Co., Roland M. Harper.

Carex communis, Bailey. 26930 Magazine Mountain Logan Co.; 27098 Jasper, Newton Co.

Carex crus-corvi Schuttlw. Corning, Clay Co.

Carex debilis var. *Rudgei* Bailey. 27142 Conway, Faulkner Co.; 24938 Lonsdale, Garland Co.

Carex festucacea var. *brevior* (Dewey) Fernald. 27107a Conway, Faulkner Co.

Carex glaucodea Tuckerm. 25069 Hazen, Prairie Co.; 24874 Hot Springs, Garland Co.

Carex gynandra (Schwein.) Boott. 24927a Lonsdale, Garland Co.

Carex hormathodes var. *Richii* Fernald. 27007 Tontitown, Washington Co.

Carex intumescens Rudge. 24990 Fulton, Hempstead Co.

Carex Jamesii Schwein. Fayetteville, Washington Co.; 5581 Beaver, Carroll Co.

Carex Joorii Bailey. 24004 Fulton, Hempstead Co.

Carex lanuginosa Michx. 24747 Fayetteville, Washington Co.

Carex laxiflora var. *gracillima* Boott. 24746 Fayetteville, Washington Co.; 24452 Hot Springs, Garland Co.

Carex laxiflora var. *latifolia* Boott. 6038 Rush, Marion Co.

Carex leptalea Wahlenb. 27132 Lofton, Hot Springs Co.

Carex louisianica Bailey. 27106 Conway, Faulkner Co.; Lonoke Co., heavy clay soil in woods.

Carex lupulina var. *pedunculata* Bailey. 6047 Corning, Clay Co.

Carex Meadii Dewey. 5533 Eureka Springs, Carroll Co.

Carex Muhlenbergii var. *enervis* Boott. 5552 Eureka Springs, Carroll Co.; 24815 Magazine Mountain, Logan Co.

Carex oligocarpa Schkuhr. 27036 Goshen, Washington Co.; 24849 Magazine Mountain, Logan Co.

Carex platyphylla Carey. 26929 Magazine Mountain, Logan Co.

Carex Sartwellii Dewey. Lonoke Co.

Carex scirpoidea Michx. 24928 Lonsdale, Garland Co.

Carex echinata var. *angustata* (Carey) Bailey. 27105a Conway, Faulkner Co.

Carex stricta var. *decora* Bailey. 24745 Fayetteville, Washington Co.

Carex tetanica Schkuhr. 27041 Eureka Springs, Garland Co.

Carex torta Boott. 26898 Lawrence, Garland Co.

Commelinaceae:

Tradescantia brevicaulis Raf. Fayetteville, Washington Co. On sandstone, cap rock of high hills.

Tradescantia hirsuticaulis Small. Hot Springs, Garland Co. (Roland M. Harper). Dry woods near summit of West Mountain.

Tradescantia occidentalis (Britton) Smyth. 25067 Hazen, Prairie Co.; Lonoke, Lonoke Co.

Tradescantia reflexa Raf. England, Lonoke Co.

Commelina communis L. (C. nudiflora Gray). Texarkana, Miller Co.

Juncaceae:

Juncus aristulatus Michx. Hazen, Prairie Co. (Roland M. Harper).

Juncus brachycarpus Engelm. 25065 Hazen. Prairie Co.; Jonesboro, Craighead Co., and S. E. Arkansas. (Roland M. Harper.)

Juncus Dudleyi Wiegand. 5995 Cotter, Marion Co.

Luzula campestris var. *bulbosa* A. Wood (*Juncoides bulbosum* (Wood) Small). Most of our plants, probably all, belong to this variety or species. N. W. and central Arkansas.

Liliaceae:

Allium stellatum Ker. West Fork, Washington Co.; 4370 Eureka Springs; Sulphur Springs, Benton Co.

Lilium superbum L. Wet meadows, Fayetteville, Washington Co. (C. Chandler).

Stenanthium robustum Watson. Fayetteville, Washington Co.; 8205 Brentwood, Washington Co.

Toxicoscordion Nuttallii (Gray) Rydb. 24929 Lonsdale, Garland Co.; Magazine Mountain, Logan Co.; Rudy, Crawford Co.

Trillium pusillum. Michx. Valley of Osage Creek and Monte Ne region, Washington and Benton Co.; War Eagle Creek Valley, Madison Co. Occurs in cherty soil in woods (rare).

Trillium Underwoodii. Small. Near Batesville, Independence Co. ("Cherty slope near Polk Bayou"—Roland M. Harper).

Smilax hispida Mühl. 10558 Cotter, Marion Co.; 22207 Van Buren, Crawford Co.

Dioscoreaceae:

Dioscorea villosa var. *glabra.* Lloyd. 5945 Cotter, Marion Co.

Amaryllidaceae:

Hypoxis hirsuta (L.) Coville (*H. erecta* L.) 25027 Hazen, Prairie Co. Also frequent in Ozark region.

Iridaceae:

Iris cristata Ait. (Formerly reported as *I. verna* L.) Cherty hills in woods north and west of Fayetteville, Washington and Benton Co.; similar situations Madison and Carroll Cos.; top of Magazine Mountain, Logan Co. A form with white flowers has been collected at Farmington and Hot Springs.

Iris foliosa. Mackenzie & Bush. Prairie Grove and Farmington, Washington Co. Rare and local (Ralph Shreve).

Sisyrinchium albidum Raf. 25061 Hazen, Prairie Co.; Fayetteville, Washington Co.

Sisyrinchium furcatum Bicknell. 25050 Hazen, Prairie Co.

Sisyrinchium graminoides Bicknell. Fayetteville, Washington Co. Common throughout the state.

Orchidaceae:

Cypripedium pubescens Willd. A specimen sent from Red Star, Newton Co., compared with material at the Herbarium of the New York Botanical Garden was found to be typical for leaf and size; 24993 McNab, Hempstead Co.

Spiranthes ovalis Lindl. (*Ibidium ovale* (Lindl.) House). Conway, Faulkner Co.

Spiranthes vernalis Engelm. & Gray. Fayetteville, Washington Co.; 8146 Ozark, Franklin Co.

Corrallorrhiza Wisteriana Conrad. Fayetteville, Washington Co.; Fulton, Hempstead Co.

Pogonia verticillata (Willd.) Nutt. 26894 Lawrence, Garland Co.

DICOTYLEDONAE.

Salicaceae:

Populus balsamifera var. *virginiana* (Henry) Sarg. Common Cottonwood. Formerly *Populus deltoides* Marsh. (*P. monilifera* Ait.) Distribution general along streams.

Salix cordata Muhl. Johnston, Washington Co.

Salix nigra var. *altissima* Sarg. Tall black willow. 5394 Fulton, Hempstead Co.

Salix longifolia Muehl. Sand Bar Willow. 24978, McNab, Hempstead Co.; 25013, Little Rock, Pulaski Co.; 25085, Helena, Phillips Co.

Salix longipes var. *Wardii* (Bebb) Schneider. Ward's willow. Fayetteville, Washington Co.; Eureka Springs and Beaver, Carroll Co.; Cotter, Marion Co.

Salix longipes var. *Wardii* x *nigra*. 20500 Eureka Springs, Carroll Co.

Leitneriaceae:

Leitneria floridana Chapm. Cork tree. 4792 Moark, 6074 Corning, Clay Co.; St. Francis River swamps (S. M. Coulter).

Juglandaceae:

Carya alba var. *ficoides* Sarg. 20990 and 22198 Van Buren, Crawford Co.

Carya alba var. *ovoidea* Sarg. 29441 McNab, Hempstead Co.

Carya alba var. *subcoriacea* Sarg. The common form in Southern and Eastern Arkansas.

Carya Buckleyi var. *arkansana* Sarg. 20991 Van Buren, Crawford Co. (type locality); 20638 Fulton, Hempstead Co.; 10524 Doddridge, Miller Co. Common throughout the state.

forma *pachylemma* Sarg. Fulton, Hempstead Co. (type locality).

Carya cordiformis var. *latifolia* Sarg. 8219 Fayetteville, Washington Co.; 20671 Cotter, Marion Co.

Carya leiodermis Sarg. 8953 Fulton, Hempstead Co.; 26653 Helena, Phillips Co.; 26491 Mt. Nebo, Yell Co.; 26424 Magazine Mountain, Logan Co.

Carya ovalis var. *obovalis* Sarg. Northern Arkansas.

Carya ovalis var. *obcordata* Sarg. 22267 Fulton, Hempstead Co.

Carya texana DC. Bitter Pecan. Van Buren, Crawford Co., bottom lands of Arkansas River (G. M. Brown).

X *Carya Brownii* Sarg. Van Buren, Crawford Co., bottom lands of Arkansas River. A hybrid between Carya cordiformis and C. pecan.

X *Carya Brownii* var. *varians* Sarg. Van Buren, Crawford Co. (G. M. Brown).

Carya alba x *Buckleyi arkansana.* 20989, 22210 Van Buren, Crawford Co.

Betulaceae:

Corylus rostrata Ait. Beaked Hazelnut. 26692 Jonesboro, Craighead Co.

Fagaceae:

Castanea alnifolia var. *floridana* Sarg. 413 McNab, Hempstead Co.; 8440 Benton, Saline Co.; 26536 Hardinville, Faulkner Co. (*C. Margaretta* Ashe).

Castanea ozarkensis Ashe. Ozark Chinquapin. (*C. arkansana* Ashe). War Eagle, Madison Co. (type locality); Benton, Washington, Carroll and other northern and western counties. (Formerly referred to *C. pumila.*)

Fagus grandifolia var. *caroliniana* Fern. & Rehd. Beech. 8076 Gum Springs, Clark Co.; Pettigrew, Madison Co., and along Mulberry Creek in Madison and Franklin Cos. The forma *mollis* Fern. & Rehd. has also been found at Helena, Phillips Co.

Quercus arkansana Sarg. Arkansas Oak. 5383, 7188, 8043, etc. McNab, Hempstead Co. Locally common in sand hills northwest of Fulton.

Quercus borealis Michx. Coll. by W. W. Ashe in Ozark National Forest near Lurton, Newton Co.

Quercus borealis var. *maxima* Ashe. Northern Red Oak. (Formerly erroneously called *Q. rubra.*) 6360 Beaver, 20510 Eureka Springs, Carroll Co.; 14300 Cotter, Marion Co.; Conway, Faulkner Co.; Fayetteville and Savoy, Washington Co., and in all of the northern, western and central counties.

Quercus coccinea Wang. Scarlet Oak. Jonesboro, Craighead Co.; reported by R. M. Harper from near Forrest City, St. Francis Co.

Quercus Durandii Buckley. Durand's Oak. 5378, 6818, etc. Fulton, 8050 McNab, Hempstead Co.

Quercus nigra var. *heterophylla* (Ait.) Ashe. 23995 Texarkana, Miller Co.; 24011 McNab, Hempstead Co.; 24312 Shirley, Van Buren Co.

Quercus palustris Muench. Pin Oak. 6069 Corning, Clay Co.; 21000 Van Buren, Crawford Co.; Conway, Faulkner Co.; Russellville, Pope Co.; Clarendon, Monroe Co. Reported by Harvey but omitted by Branner & Coville.

Quercus Phellos L. Willow Oak. Conway, Faulkner Co.; Pine Bluff, Jefferson Co.; Alma, Crawford Co.; Clarksville, Johnson Co. Reported by Harvey but omitted by Branner & Coville.

Quercus prinoides Willd. Shin Oak, Prairie Oak. Benton Co., margins of prairies (F. L. Harvey).

Quercus obtusa Ashe. Water Oak. Southern Arkansas. *Q. rhombica* Sarg.)

Quercus rubra L. Southern Red Oak. (Formerly *Quercus triloba* Michx., *Q. digitata* Sudw., *Q. falcata* Michx.) Common throughout except in parts of Ozark region.

Quercus rubra var. *leucophylla* Ashe. Little Rock, Pulaski Co.; Fulton, Hempstead Co.; Stuttgart, Arkansas Co.; Conway, Faulkner Co.

Quercus rubra var. *pagodaefolia* (Ell.) Ashe. Coastal Plains, S. E. Arkansas (fide Roland M. Harper).

Quercus Shumardii Buckley, Spotted Oak. (Formerly reported as *Quercus texana.*) Fulton, 20635 McNab, Hempstead Co.; Dermott, Chicot Co.; Savoy, Washington Co.; 6009 Cotter, Marion Co.

Quercus Shumardii var. *Schneckii* (Britton) Sarg. Spotted Oak. 8182 Fayetteville, Washington Co.; Benton Co.; Madison Co.; 4453 Eureka Springs, Carroll Co.; 8949 Fulton, Hempstead Co.

Quercus stellata Wang. Post Oak. (*Quercus minor* Sarg.) General distribution. Listed by Harvey but omitted by Branner and Coville.

Quercus stellata var. *araniosa* Sarg. Sand Post Oak. 22454, 8985, Texarkana, Miller Co.; 8439 Benton, Saline Co.

Quercus stellata var. *Margaretta* Ashe. Southern Arkansas.

Quercus velutina var. *missouriensis* Sarg. Benton Co.; Washington Co.; Austin, Lonoke Co.; Conway, Faulkner Co.

Hybrid Oaks:

X *Quercus Bushii* Sarg. (*Q. marilandica* x *Q. velutina.*) 20509 Eureka Springs, Carroll Co.; Fayetteville, Washington Co. (Mock St. and also on Lindell Ave.)

X *Quercus Rudkinii* Britton. (*Q. marilandica* x *Q. Phellos.*) 10504, 23999, etc. Fulton, Hempstead Co.

X *Quercus Schochiana* Dieck. (*Q. palustris* x *Q. Phellos.*) 27096 Dover, Conway Co.; Faulkner Co. (D. Demaree).

X *Quercus subfalcata* Trel. (*Q. Phellos* x *Q. rubra.*) 22466, 24013, etc. Fulton and McNab, Hempstead Co.; Cove Creek, Faulkner Co. (D. Demaree).

Quercus Durandii x *stellata.* 12659, 20715, etc. McNab, Hempstead Co.

Quercus nigra x *Shumardii.* 22301 McNab, Hempstead Co.

Quercus nigra x *rubra.* 23139, 24876, etc. Hot Springs, Garland Co.

Ulmaceae:

Ulmus serotina Sarg. 6944, Jasper, Newton Co.; 21013 Van Buren, Crawford Co.; 26603 Magnet Cove, Hot Springs Co.; 22277 McNab, Hempstead Co.

Celtis laevigata var. *texana* Sarg. Southern Hackberry. 412 McNab, Hempstead Co.; 20491 Eureka Springs, Carroll Co. Common throughout the state.

Celtis occidentalis var. *canina* (Raf.) Sarg. Fayetteville, Goshen, Washington Co.; 14329 Cotter, Marion Co.

Celtis occidentalis var. *crassifolia.* (Lam.) Gray. Rough leaved Hackberry. 20672 Cotter, Marion Co.; 22208, 21012 Van Buren, Crawford Co.

Celtis pumila var. *georgiana* (Small) Sarg. Savoy, West Fork, Washington Co.

Moraceae:

Broussonetia papyrifera (L.) Vent. (*Papyrius papyrifera* (L). Kuntze). Cultivated, occasionally escaped. Paper Mulberry.

Aristolochiaceae:

Asarum reflexum. Bicknell. Johnson, Goshen, Kessler Mountain, West Fork, Washington Co. Frequent in Ozark region.

Aristolochia reticulata. Nutt. 8058 McNab, Hempstead Co.; 8384 Ashdown, Little River Co. Reported in Nuttall's Arkansas Flora but omitted from all subsequent lists.

Polygonaceae:

Eriogonum longifolium Nutt. 14319 Cotter, Marion Co. In sandy soil.

Eriogonum hirsutum Nutt. North Arkansas and Missouri border region, confined to calcareous rocks.

Polygonum densiflorum Meisn. (*Persicaria portoricensis* Small.) St. Francis River, Mississippi Co. (S. M. Coulter).

Chenopodiaceae:

Chenopodium Botrys L. 14304 Cotter, Marion Co.

Amaranthaceae:

Froelichia gracilis Moq. Fayetteville, 8215 Brentwood, Washington Co.

Nyctaginaceae:

Boerhaavia erecita L. 8065 Arkadelphia, Clark Co.; 24257 Hot Springs, Garland Co.

Caryophyllaceae:

Cerastium brachypodum (Engelm.) Robinson. Short stalked Chickweed. Fayetteville, Washington Co. Waste fields.

Cerastium semidecandrum L. Fayetteville, Washington Co.

Stellaria media (L.) Cyrill. Common Chickweed. Waste places over entire state, sometimes flowering during all months of winter.

Saponaria Vaccaria L. Cow herb. Conway, Faulkner Co., near tunnel (H. E. Wheeler).

Silene nivea (Nutt.) Otth. Fayetteville, Washington Co., escaped from cultivation.

Portulacaceae:

Talinum calycinum Engelm. 4563 Eureka Springs, Carroll Co.; 26215 Cotter, Baxter Co.

Talinum parviflorum Nutt. Thin soil above sandstone cap rock of waterfall near Winslow, Washington Co.; Fourche Mountain, Little Rock, on "Pulaskite" rocks.

Nymphaeaceae:

Cabomba caroliniana Gray. Near Blytheville, Mississippi Co.; St. Francis River swamps (S. M. Coulter).

Ranunculaceae:

Anemone caroliniana Walt. Fayetteville, Washington Co.; Conway, Faulkner Co.

Anemone decapetala Ard. Along sandstone cliffs, south slopes, near base of Magazine Mountain, Logan Co.

Delphinium Nortonianum Mackenzie & Bush. Fayetteville, Washington Co.

Delphinium Treleasei Bush. 27038 Eureka Springs, Carroll Co.

Delphinium Penardii Huth. 5585 Beaver, Carroll Co. Frequent in barrens and on prairies of Ozark region.

Ranunculus hispidus Michx. 5597 Eureka Springs, Carroll Co.

Thalictrum texanum (Gray) Small. 7151 Fulton, Hempstead Co.

Clematis versicolor Small. (*Viorna versicolor* Small.) 6352 Beaver, Carroll Co.; 8226 Westfork, Fayetteville, Washington Co.

Clematis reticulata Walt. (*Viorna reticulata* Small.) 10508 Columbus, Hempstead Co.

Clematis paniculata Thunb. 20498 Eureka Springs, Carroll Co. Introduced along rocky creek.

Anonaceae:

Asimina parviflora (Michx.) Dunal. Crowley's Ridge north of Helena, Phillips Co. (fide Roland M. Harper.)

Menispermaceae:

Cocculus carolinus (L.) DC. (*Epibaterium carolinum* Britton). 6005 Cotter, Marion Co.; 22193 Van Buren, Crawford Co.; Fayetteville, Washington Co. Common throughout the state.

Calycocarpum Lyoni (Pursh) Nutt. 25153 Helena, Phillips Co.; 26541 Cove Creek, Faulkner Co.; 24290 Shirley, Van Buren Co.

Fumariaceae:

Corydalis campestris (Britton) new comb. (*Capnoides campestre* Britton). Benton Co. (Type locality).

Cruciferae:

Coronopus didymus (L.) J. E. Sm. 24989 Fulton, Hempstead Co.; Conway, Faulkner Co. A troublesome pasture weed.

Sisymbrium altissimum L. (*Norta altissima* Britton). 8158 Ozark, Franklin Co.; Washington Co.

Erysimum inconspicuum (Wats.) MacM. Northwest Arkansas (E. N. Plank).

Camelina sativa (L.) Crantz. Gold of Pleasure. Fayetteville, Washington Co. Naturalized from Europe.

Dentaria laciniata Muhl. 24855 Magazine Mountain, Logan Co.

Cardamine pennsylvanica Muhl. 24458 Hot Springs, Garland Co.; Fayetteville, Washington Co.

Cardamine parviflora L. 7176 Fulton, Hempstead Co.; 24451 Hot Springs, Garland Co.; Conway, Faulkner Co.; Fayetteville, Washington Co.

Droseraceae:

Drosera annua E. L. Reed. Conway, Faulkner Co., Campus of State Teachers College.

Saxifragaceae:

Saxifraga texana Buckl. (*Micranthes texana* Small). Conway, Faulkner Co.; Fayetteville, Washington Co.

Heuchera arkansana Rydb. (May be the *H. villosa* of Harvey.) On cliffs, Northwest Arkansas.

Heuchera hirsuticaulis (Wheelock) Rydb. Shaded north slopes, on Boone chert hills, Washington Co.

Heuchera macrorhiza Small. Fayetteville, Washington Co.

Heuchera parviflora Bartl. Springdale, Washington Co.; Shirley, Van Buren Co. On moist cliffs. Flowers in October.

Philadelphus pubescens Schrad. Cove Creek, Faulkner Co.; 6934 Jasper, Newton Co.; 6033 Rush, Marion Co.; Shirley, Van Buren Co.; Magazine Mountain Logan Co.

Hydrangea cinerea Small. 6959 Heber Springs, Cleburne Co.; 25160 Helena, Phillips Co.; 25205 Shirley, Van Buren Co.

Ribes Cynosbati L. Prickly Gooseberry. (*Grossularia Cynosbati* Mill.). 242 Rich Mountain, Polk Co.; Magazine Mountain, Logan Co.

Ribes missouriense Nutt. Gooseberry (*Grossularia missouriensis* Coville & Brit.) 5572 Beaver, Carroll Co.

Hamamelidaceae:

Hamamelis macrophylla Pursh. Witch-hazel. 249 Rich Mountain, Polk Co.; 8441 Benton, Saline Co.; 22296 McNab, Hempstead Co.

Hamamelis vernalis Sarg. Spring-blooming Witch-hazel. 6032 Rush Marion Co.; 12649, Mena, Polk Co.; Goshen, Washington Co. Common along rocky streams of Ozark region.

Hamamelis vernalis var. *tomentella* Sarg. 20494 Eureka Springs, Carroll Co.

Rosaceae:

Physocarpus intermedius (Rydb.) Schneider. Nine Bark. (*Opulaster intermedius* Rydb.) 4385 Eureka Springs, Carroll Co.; 5573 Beaver, Carroll Co..; 5982 Cotter, Marion Co. Probably the *Neillia opulifolia* Benth. & Hook., observed by Lesquereux and by Harvey, belongs here.

Malus angustifolia (Ait.) Michx. Narrow-leaved Crabapple. 20719 Arkadelphia, Clark Co.

Malus iowensis var. *Palmeri* Rehd. 10581 Washington, Hempstead Co.

Crataegus. Crus-galli group:

Crataegus bellica Sarg. 5335, 5336 Fulton, Hempstead Co. (type locality).

Crataegus Bushii Sarg. 5344 Fulton, Hempstead Co. (type locality); 277 Rich Mountain, Polk County; 24531 High Point, Garland Co.

Crataegus erecta Sarg. 21017 Van Buren, Crawford County.

Crataegus Palmeri Sarg. Fayetteville, Washington Co.

Crataegus paradoxa Sarg. 20993 Van Buren, Crawford Co.

Crataegus pilifera Sarg. 5540 Eureka Springs, Carroll Co.; Van Buren, Crawford Co.

Crataegus subpilosa Sarg. Eureka Springs, Carroll Co. (type locality).

Crataegus triumphalis Sarg. 5371, 6825, Fulton, Hempstead Co. (type locality).

Crataegus palliata Sarg. Fulton, Hempstead Co. (type locality).

Crataegus villiflora Sarg. 5519, 5522. Eureka Springs, Carroll Co.; 20992, 22205 Van Buren, Crawford Co.

Crataegus. Punctatae group:

Crataegus fastosa Sarg. Fulton, Hempstead Co. (type locality).

Crataegus secta Sarg. 19028 Sulphur Springs, Benton Co.

Crataegus sordida var. *villosa* Sarg. 20709, 22266 McNab, Hempstead Co.

Crataegus sucida Sarg. 4387 Eureka Springs, Carroll Co.; 8179 Fayetteville, Washington Co.

Crataegus verruculosa Sarg. 24453 Hot Springs, Garland Co.

Crataegus. Virides group:

Crataegus amicalis Sarg. Fulton, Hempstead Co., (type locality).

Crataegus blanda Sarg. 20712 McNab, Hempstead Co.; 24496 Hot Springs, Garland Co.

Crataegus micrantha Sarg. Fulton, Hempstead Co. (type locality).

Crataegus velutina Sarg. Fulton, Hempstead Co. (type locality).

Crataegus viridis L. 4789 Moark, Clay Co.; 5345 Fulton, Hempstead Co.; 8134 Little Rock, Pulaski Co.; 8221 Greenland, Washington Co. The collections credited to Harvey as *C. arborescens* Ell. probably belong here, since this is the species occurring in the Fayetteville region.

Crataegus. Intricatae group:

Crataegus Harveyana Sarg. Eureka Springs, Carroll Co. (type locality); 26849 Hot Springs, Garland Co.

Crataegus leioclada Sarg. 4388, 5539, 5547, Eureka Springs, Carroll Co.

Crataegus neobushii Sarg. 5546 Eureka Springs, Carroll Co.

Crataegus villicarpa Sarg. 5525 Eureka Springs, Carroll Co.

Crataegus padifolia var. *incarnata* Sarg. 6026 Cotter, Marion Co.; 26611 Magnet Cove, Hot Springs Co.

Crataegus. Tenuifoliae (?) group:

Crataegus lacera Sarg. Fulton, Hempstead Co. (type locality).

Crataegus. Molles group:

Crataegus arkansana Sarg. Type (at Arnold Arboretum) from seed collected at Newport, Arkansas.

Crataegus brachyphylla Sarg. 432, 8975, 9393, 9392, 10607, 16333, 20711, McNab, Hempstead Co. (type locality).

Crataegus invisa Sarg. 5397, Fulton (type locality), 6879, 7193, 7196, McNab, Hempstead Co.

Crataegus induta Sarg. Fulton, Hempstead Co. (type locality).

Crataegus limaria Sarg. Fulton, Hempstead Co. (type locality).

Cartaegus transmississippiensis Sarg. 8419 Cotter, Marion Co. (type locality).

Crataegus. Dilatatae group:

Crataegus coccinoides Ashe. Farmington, Washington Co.

Crataegus. Uniflorae group:

Crataegus trianthophora Sarg. 6970 Heber Springs, Cleburne Co.; 26535 Cove Creek, Faulkner Co.; 26885 Lawrence, Garland Co.; 14322 Cotter, Marion Co.; Fulton, Hempstead Co. (B. F. Bush 5690); Baker Springs, Howard Co. (J. H. Kellogg).

Crataegus. Brachyacanthae group:

Crataegus brachyacantha Sarg. & Engelm. 315 Texarkana, Miller Co.; 8386 Ashdown, Little River Co.

Crataegus. Macracanthae group:

Crataegus carrollensis Sarg. Eureka Springs, Carroll Co. (type locality).

Crataegus hispidula Sarg. 5542 Eureka Springs, Carroll Co.

Crataegus mollicula Sarg. 6023 Rush, Marion Co.

Crataegus pudens Sarg. 20998, 22204 Van Buren, Crawford Co.

Crataegus tomentosa L. This species, reported by Branner & Coville, is found in Arkansas, but the variety *punctata* Gray (*C. punctata* Jacquin), reported also by them, probably does not occur here.

Crataegus aestivalis (Walt.) T. & G., *C. coccinea* L., *C. flexispina* (Moench) Sarg. and *C. subvillosa* Schrad., listed for Arkansas by Branner & Coville, very probably are not found here and should be dropped from the state plant list.

C. cordata Ait. (=*C. phaenopyrum* (L. f.) Medic.) and *C. crus-galli* L. reported by Harvey may occur in the northern counties.

Crataegus hybrids:

X *Crataegus notha* Sarg. A hybrid between *C. apiifolia* and *C. brachyphylla*. 8974, 20646, 20716 McNab, Hempstead Co.

Alchemilla arvensis Scop. Lady's Mantle. 23133 Hot Springs, Garland Co.

Potentilla recta L. Fayetteville, Washington Co.

Prunus mexicana Watson. Mt. Nebo, Yell Co.; Rich Mountain, Polk Co.; 7149 Fulton, 16329 McNab, Hempstead Co.; 20474 Eureka Springs, Carroll Co.; 20668 Cotter, Marion Co.

Prunus mexicana var. *fultonensis* Sarg. 12663 Fulton, Hempstead Co. (type locality).

Prunus mexicana var. *polyandra* Sarg. Fulton, Hempstead Co.

Prunus Munsoniana Wight & Hedrick. Fulton, Hempstead Co.

Prunus umbellata Ell. 8109 Gifford, Hot Springs Co.; 10597 Washington, Hempstead Co.

Prunus umbellata var. *tarda* (Sarg.) Wight. 10535 Arkadelphia, Clark Co.

Prunus angustifolia var. *varians* Wight. 7148 Fulton, Hempstead Co.

Rosa Eglanteria L. (*Rosa rubiginosa* L.) Escaped from cultivation, Fayetteville, Washington Co.

Rosa Lyonii Pursh. 24957 Hot Springs, Garland Co.; 24994 McNab, Hempstead Co.; 25055 Mesa, Prairie Co.; 25103 Helena, Phillips Co.

Rosa Palmeri Rydb. 8067 Ashdown, Little River Co.

Rosa setigera var. *tomentosa* T. & G. 22294 McNab, Hempstead Co.; 5978 Cotter, Marion Co.; 20507 Eureka Springs, Carroll Co.

Rosa subserrulata Rydb. 8159 Ozark, Franklin Co.; 10531 Ft. Lynn, Miller Co.; 6960 Heber Springs, Cleburne Co.; 8137 Little Rock, Pulaski Co.

Rosa texarkana Rydb. Type collected by Eggert, Texarkana, Miller Co.

Rubus occidentalis L. 5574 Beaver, Carroll Co. Common throughout Ozark region.

Rubus ostryaefolius Rydb. 16315 Texarkana, Miller Co.

Rubus Andrewsianus Blanchard. Fulton, Hempstead Co. The common high blackberry throughout the State.

Rubus rubrisetus Rydb. 327 Texarkana, Miller Co.; 20727 Gum Springs, Clark Co.

Leguminosae:

Amorpha croceolanata Watson. (*A. fruticosa* var. *croceolanata* Schneider). 948 Cove Creek, Faulkner Co.; 23051, 26863 Hot Springs, Garland Co.; 26918 Magnet Cove, Hot Springs Co.

Amorpha nitens Boynton. 23148, 26862 Hot Springs, Garland Co.; 26915 Magnet Cove, Hot Springs County.

Amorpha tennesseensis Shuttl. 20659 Cotter, Marion Co.; 24251 Hot Springs, Garland Co.; Van Buren, Crawford Co. (G. M. Brown).

Amorpha glabra Desf. 24187 Magazine Mountain, Logan Co.; Hot Springs, Garland Co.; Rich Mountain, Polk County.

Baptisia sulphurea Engelm. Little Rock, Pulaski Co. (H. E. Wheeler).

Cassia Medsgeri Shafer. Fayetteville and Westfork, Washington Co.; 6885 Eureka Springs, Carroll Co.; Cotter, Marion Co. Frequent in Ozark region and perhaps throughout the state.

Cladrastis lutea (Michx.) K. Koch. Kessler Mountain, near Farmington, Washington Co.; Magazine Mountain, Logan Co.; Shirley, Van Buren Co.; 8408 Cotter, Marion Co.

Lathyrus latifolius L. Perennial Pea. Fayetteville, Washington Co. Escaped from cultivation.

Lespedeza procumbens Michx. Fayetteville, Washington Co.; Eureka Springs, Carroll Co.

Medicago arabica Huds. Spotted Medick. Fayetteville, Washington Co. (R. H. Austin). Escaped from cultivation.

Medicago lupulina L. Black Medick. Fayetteville, Washington Co. Introduced.

Melilotus officinalis (L.) Lam. Yellow Sweet Clover. Washington Co., waste places, introduced and becoming common in many parts of the state.

Melilotus alba Desv. White Sweet Clover. Introduced and becoming abundant all over the state.

Desmodium paniculatum var. *pubens* T. & G. 4475 Eureka Springs, Carroll Co.

Petalostemum villosum Nutt. 5994 Cotter, Marion Co.

Phaseolus polystachyus (L.) B. S. P. Wild Kidney Bean. 8396 Cotter, Marion Co.; 10592 Washington, Hempstead Co.

Sesbania macrocarpa Nutt. Fulton, Hempstead Co. (4405 J. M. Greenman).

Stizolobium Deeringianum Bort. Velvet Bean. McNab, Hempstead Co. (4436 J. M. Greenman).

Wistaria macrostachya Nutt. Fulton and McNab, Hempstead Co.

Strophostyles umbellata (Muhl.) Britton. 12655 McNab, Hempstead Co.

Strophostyles helvola (L.) Britton. Fayetteville, Washington Co.

Trifolium hybridum L. Alsike Clover. Fayetteville, Washington Co. Introduced. (R. H. Austin).

Trifolium dubium Sibth. Fayetteville, Washington Co.; Eagle Mills, Ouachita Co. Introduced.

Vicia angustifolia (L.) Richard. 24510 Hot Springs, Garland Co. Introduced.

Vicia sativa L. Fayetteville, Washington Co. Introduced.

Vicia tetrasperma (L.) Moench. 5395 Fulton, Hempstead Co. Introduced.

Geraniaceae:

Erodium cicutarium (L.) L'Hér. University of Arkansas campus, Fayetteville (A. D. Oxley).

Geranium pusillum Burm. f. University of Arkansas campus, Fayetteville.

Oxalidaceae:

Oxalis Brittonae Small. England, Lonoke Co.

Oxalis texana (Small) Fedde. Introduced in favored places or as weed in greenhouses.

Oxalis Langliosii (Small) Fedde. Fayetteville, Washington Co.

Oxalis interior (Small) Fedde. Benton Co. (type locality) (E. N. Plank).

Linaceae:

Linum medium (Planch.) Small. Hazen, Prairie Co. (Roland M. Harper).

Zygophyllaceae:

Tribulus terrestris L. Ft. Smith, Sebastian Co.; 6094 Corning, Clay Co.

Rutaceae:

Ptelea pulpudrana Greene. 5923, 5921 Cotter, Marion Co.; 6957 Heber Springs, Cleburne Co.

Zanthoxylum americanum Mill. Savoy, Washington Co.

Meliaceae:

Melia Azedarach L. Escaped from cultivation, Fulton, Hempstead Co.

Euphorbiaceae:

Andrachne phyllanthoides (Nutt.) Muell. Arg. 5528 Eureka Springs, 27053 Berryville, Carroll Co.; Magazine Mtn., Logan Co.; Hot Springs, Garland Co.

Croton Engelmanni var. *albinoides* Ferg. Fulton, Hempstead Co.; Texarkana, Miller Co.; Ashdown, Little River Co.

Crotonopsis elliptica Willd. 6962 Heber Springs, Cleburne Co., also common in barrens of Ozark region.

Euphorbia arkansana Engelm. & Gray. (*Tithymalus arkansanus* Kl. & Garcke). Clark Co. (C. Woolsey).

Euphorbia commutata Engelm. (*Tithymalus commutatus* Kl. & Garcke). Eureka Springs, Carroll Co. (C. Woolsey).

Euphorbia Nuttallii Engelm. (*Chamaesyce Nuttallii* Small). 6333 Beaver, Carroll Co.

Tragia ramosa Torr. 4382 Eureka Springs, Carroll Co.

Anacardiaceae:

Cotinus americanus Nutt. American Smoke-tree, Chittamwood. 5971, 10556 Cotter, Marion Co.; Van Buren, Crawford Co. (G. M. Brown).

Rhus trilobata Nutt. Polecat-bush. (*Schmaltzia trilobata* Small). 4384 Eureka Springs, Carroll Co.; 4754, 8411 Cotter, Marion Co. Common on rocky bluffs of Ozark region. *Schmaltzia serotina* Greene also occurs in the northern part of the state and may be distinct.

Rhus quercifolia (Michx.) Steud. Poison Oak. 258 Rich Mountain, Polk Co.; 24810 Blue Mountain, Logan Co.; 25052 Hazen, Prairie Co.

Aquifoliaceae:

Ilex caroliniana (Walt.) Trel. 12661, 14648 McNab, Hempstead Co.; 23060 Hot Springs, Garland Co.; Cove Creek, Faulkner Co.

Aceraceae:

Acer floridanum (Chapm.) Pax. McNab, Hempstead Co.; Crowley's Ridge (Roland M. Harper).

Acer leucoderme Small. 24508, 26474, etc. Hot Springs, Garland Co.; Baker Springs, Howard Co. (J. H. Kellogg).

Acer saccharum var. *glaucum* (Pax.) Sarg. 14313 Cotter, Marion Co.; 20488 Eureka Springs, Carroll Co. The common Sugar Maple of the state.

Acer saccharum var. *Rugellii* (Pax.) Rehd. Eureka Springs, Carroll Co.; near Hindsville, Madison Co.

Acer rubrum var. *Drummondii* (Hook. & Arn.) Sarg. (*Acer Drummondii* Hook. & Arn.) 7164 Fulton, Hempstead Co.; St. Francis River swamps (S. M. Coulter).

Acer rubrum var. *tridens* Wood. 8364 Ashdown Little River Co.; Fulton, Hempstead Co.

Acer Negundo var. *texanum* Pax. 6977 Heber Springs, Cleburne Co.; 8072 Arkadelphia, Clark Co.; 14639 Cotter, Marion Co.; 22261 Fulton, Hempstead Co. The form *latifolia* Sarg. is also found at Fulton.

Hypocastanaceae:

Aesculus discolor var. *mollis* Sarg. Red-flowered Buckeye. (*Aesculus austrina* Small). 8078 Gum Springs, Clark Co.: Austin, Lonoke Co.; Fulton, Hempstead Co. Common over the state except in parts of the Ozark region.

Aesculus glabra var. *micrantha* Sarg. Fulton, Hempstead Co. (type locality).

Aesculus glabra var. *pallida* Kirch. 8203 Winslow, Washington Co.

Aesculus glabra var. *leucodermis* Sarg. (Reported by Harvey as *A. glabra*). Fayetteville, Washington Co.; 4442 Eureka Springs, Carroll Co.

X *Aesculus Bushii* Schneider. Fulton, Hempstead Co. (type locality). (B. F. Bush). A supposed hybrid between *A. glabra* var. *leiodermis* and *A. discolor* var. *mollis*.

Sapindaceae:

Sapindus Drummondii Hook & Arn. 5949 Cotter, Marion Co.; Fulton, Hempstead Co.; Savoy, Washington Co.

Rhamnaceae:

Ceanothus ovatus Desf. 21015 Van Buren, Crawford Co.; Farmington, Washington Co.

Ceanothus pubescens (T. & G.) Rydb. North Arkansas, exposed limestone ledges.

Rhamnus lanceolata Pursh. 5931, (17239) Cotter, Marion Co.; 20495 Eureka Springs, Carroll Co.

Vitaceae:

Ampelopsis cordata Michx. False Grape. Fayetteville, Washington Co.; 5933 Cotter, Marion Co.

Parthenocissus quinquefolia var. *hirsuta* (Don.) Planch. 216 Huntsville, Madison Co.; 22189, 22209. Van Buren, Crawford Co.

Parthenocissus quinquefolia var. *Saint-Paulii* (Koehne & Graebn.) Rehd. 5909 Cotter, Marion Co.; 22269 Fulton, Hempstead Co.

Vitis cinera Engelm. Winter Grape. 5932 Cotter, Marion Co. Common throughout state.

Vitis Linsecomii var. *glauca* Munson. Post Oak Grape. 5554 Eureka Springs, Carroll Co.; 22191 Van Buren, Crawford Co.; 228 McNab, Hempstead Co.; Fayetteville, Washington Co.

Vitis rotundifolia Michx. Muscadine. Conway, Faulkner Co.; 257 Rich Mountain, Polk Co.; Forrest City, St. Francis Co.; 6839 Columbus, Hempstead Co.; 8470 Gifford, Hot Springs Co.; 6956 Heber Springs, Cleburne Co.

Vitis palmata Vahl. 6052 Corning, Clay Co.; 10526 Ft. Lynn, Miller Co.; 12667 McNab, Hempstead Co.

Tiliaceae:

Tila caroliniana Mill. 16336 McNab, Hempstead Co.

Tilia caroliniana var. *rhoophila* Sarg. 8074 Gum Springs, Clark Co.

Tilia floridana Small. (*Tilia pubesceus* Ait., reported by Coville, may belong here). 7204, 9401 McNab, Hempstead Co.; 20512 Eureka Springs, Carroll Co.; 20657 Cotter, Marion Co.; 20729 Gum-Springs, Clark Co.

Tilia floridana var. *hypoleuca* Sarg. 5943 Cotter, Marion Co.; Kessler Mountain near Farmington, Washington Co.

Tilia nuda Sarg. Fulton, Hempstead Co.

Malvaceae:

Callirhoe alcaeoides (Michx.) Gray. University of Arkansas campus, Fayetteville.

Callirhoe Bushii Fernald. Baldwin, Savoy, Washington Co.

Callirhoe triangulata (Leavenworth) Gray. 5977 Cotter, Marion Co.

Hibiscus incanus Wendl. 466, 16321 Fulton, Hempstead Co.

Hibiscus lasiocarpus Cav. 8365 Ashdown, Little River Co.; 26638 Helena, Phillips Co.

Malvastrum angustatum Gray. 6910 Harrison, Boone Co.

Hypericaceae:

Ascyrum multicaule Michx. 22289 McNab, Hempstead Co.

Hypericum apocynifolium Small. Hazen, Prairie Co. and S. E. coastal plain. (Roland M. Harper).

Hypericum pseudomaculatum Bush. Fayetteville, Washington Co.; 5957 Cotter, Baxter Co.; 8155 Ozark, Franklin Co.

Hypericum oklahomense E. J. Palmer. Cove Creek, Faulkner Co.

Cistaceae:

Lechea villosa Ell. 8122 Malvern, Hot Springs Co.

Helianthemum rosmarinifolium Pursh. 8162 Piney, Johnson Co.

Violaceae:

Viola eriocarpa Schwein. Johnson and Elm Springs, Washington Co. (*V. pubescens* Ait, of Branner and Coville, probably belongs here).

Viola fimbriatula J. E. Sm. 420 and 7153 McNab, Hempstead Co.

Viola Lovelliana Brainerd. Mena, Polk Co. (E. Brainerd).

Viola missouriensis Greene. Osage Creek, Washington Co.; Benton Co.; 5393, 7165, Fulton, Hempstead Co.

Viola primulifolia L. Washington, Hempstead Co.; West Mountain near Hot Springs, Garland Co.

Viola sororia Willd. Fayetteville, Washington Co.; 4782 Moark, Clay Co.

Viola triloba Schwein. (This may be Harvey's var. *cordata*). Mt. Comfort, Washington Co.; 5374, 7150, 9390 Fulton, Hempstead Co.

Viola triloba var. *dilatata* (Ell.) Brainerd. Mena, Polk Co., West Fork, Washington Co.; (Westville, Okla. E. Brainerd).

Viola papilionacea Pursh. 24465 Hot Springs, Garland Co.; Fayetteville, Washington Co.; Mena, Polk Co. (E. Brainerd).

Viola striata Ait. Fayetteville, Washington Co.

Viola viarum Pollard. Along White River. (E. Brainerd).

Lythraceae:

Cuphea petiolata (L.) Koehne. (*Parsonsia petiolata* Rusby). 4423 Eureka Springs, Carroll Co.

Onagraceae:

Oenothera linearis Michx. (*Kneiffia linearis* Spach). Fayetteville, Washington Co.; 23218 Top of Magazine Mountain, Logan Co.; 5404 Fulton, Hempstead Co.

Oenothera missouriensis Sims. (*Megapterium missouriense* Spach). Eureka Springs, Carroll Co.

Oenothera arenicola (Small) Coker. (*Kneiffia arenicola* Small). 25038 Hazen, Prairie Co.

Cornaceae:

Cornus alternifolia L. Sylamore, Stone Co. (W. W. Ashe), also in Washington Co.

Cornus stricta Lam. 6090 Corning, 10591 Moark, Clay Co.; 12649a Mena, Polk Co.; 8363 Ashdown, Little River Co.; 16324 Fulton, Hempstead Co.

Umbelliferae:

Ammoselinum Butleri (Engelm.) Coult. & Rose. Credited to State in Coulter & Rose, Monograph of Umbelliferae.

Angelica villosa (Walt.) B. S. P. 6024 Rush, Marion Co.

Chaerophyllum texanum Coult. & Rose. 5409 Fulton, Hempstead Co.

Daucus Carota L. Along roadsides and railroads, Fayetteville, Washington Co.

Erigenia bulbosa (Michx.) Nutt. West Fork, Washington Co.

Eryngium prostratum Nutt. 6048 Corning, Clay Co.; 8166 London, Pope Co.

Hydrocotyle bonariensis Lam. Coastal Plain of Arkansas. (Roland M. Harper).

Ptilimnium Nuttallii (DC.) Britton. 8027 Fulton, Hempstead Co.; 8164 Piney, Johnson Co.

Ptilimnium capillaceum (Michx.) Raf. 26682 Jonesboro, Craighead Co.

Sium suave Walt. (*Sium cicutaefolium* Schrank). St. Francis River swamps. (S. M. Coulter).

Torilis Anthriscus (L.) Bernh. Fayetteville, Washington Co. (Miss C. Chandler).

Zizia aurea (L.) Koch. 5559 Eureka Springs, Carroll Co.

Zizia cordata (Walt.) DC. 5557 Eureka Springs, Carroll Co.

SYMPETALAE.

Ericaceae:

Monotropa Hypopitys L. (*Hypopitys americana* Small). Prarie View, Washington Co., densely wooded north slopes of chert hills.

Rhododendron oblongifolium (Small) Millais. Azalea, Honeysuckle. (*Azalea oblongifolia* Small). 6932 Jasper, Newton Co.; 6973 Heber Springs, Cleburne County; 10505 Columbus, Hempstead Co.; 10515 Doddridge, Miller Co.

Rhododendron roseum (Loisel.) Rehd. Azalea, Honeysuckle. 260 Rich Mountain, Polk Co.; 26466 Meaford, Garland Co.; Batesville, Independence Co.; Cove Creek, Faulkner Co.

Rhododendron canescens (Michx.) G. Don (*Azalea canescens* Michx.). Yellville, Marion Co.

Vaccinium arboreum var. *glaucescens* (Greene) Sarg. (*Batodendron glaucescens* Greene). 6942 Jasper, Newton Co.

Vaccinium vacillans Kalm. Fulton, Hempstead Co. and occasional through Ozark region, but much less common than the following variety.

Vaccinium vacillans var. *crinitum* Fernald. 5556 Eureka Springs, Carroll Co.; 5989 Cotter, Marion Co. Common throughout Ozark region.

Primulaceae:

Dodecatheon brachycarpa Small. Wheeler, Washington Co.

Steironema intermedium Kearney. Fayetteville, Washington Co.

Sapotaceae:

Bumelia lycioides (L.) Pers. 25137, 26649 Helena, Phillips Co.; 26725 McNab, Hempstead Co.

Ebenaceae:

Diospyros virginiana var. *platycarpa* Sarg. Large-fruited Persimmon. 20669 Cotter, Marion Co., also in northwestern counties.

Styracaceae:

Halesia monticola var. *vestita* Sarg. Silver-bell Tree. 255 Rich Mountain, Polk Co.; 6978 Heber Springs, Cleburne Co.; 24926 Hot Springs, Garland Co.

Oleaceae:

Forestiera acuminata var. *vestita* E. J. Palmer. Miller Co. (type by Bush); Fulton, Hempstead Co.; Van Buren, Crawford Co.

Ligustrum vulgare L. Privet. 14321 Cotter, Marion Co. Escaped from cultivation.

Fraxinus pennsylvanica var. *lanceolata* (Borck.) Sarg. Green Ash. 6073 Corning, Clay Co.; 5942 Cotter, Marion Co.; 8080 Arkadelphia, Clark Co.; Fayetteville, Washington Co. Common along streams throughout state.

Fraxinus profunda Bush. Pumpkin Ash. 6067 Corning, Clay Co.; St. Francis River swamps (S. M. Coulter).

According to Harvey, *Fraxinus nigra* Marsh (*F. sambucifolia* L.) is found in Arkansas. This is probably an error which has been repeated by others.

No specimens are to be found in any of the American herbaria and Harvey left no specimens in the University of Arkansas collections.

Gentianaceae:

Bartonia virginica (L.) B. S. P. 10586 Washington, Hempstead Co.; 26476 Lonsdale, Garland Co.

Centaurium texense (Griseb.) Fernald. (*Erythraea texensis* Griseb. Northern Arkansas border counties.

Gentiana flavida Gray. (*Dasystephena flavida* Britton.) Magazine Mountain, Logan Co.

Apocynaceae:

Amsonia tabernaemontana Vail. Fayetteville, Washington Co.; Lonoke, Lonoke Co.

Apocynum cannabinum var. *pulescens* (R. Br.) DC. 6092 Corning, Clay Co.

Vinca minor L. Periwinkle or Myrtle. Washington Co. Escaped locally from cultivation.

Asclepiadaceae:

Asclepias stenophylla Gray. 8397 Cotter, Marion Co.

Asclepias Sullivantii Engelm. Fayetteville, Washington Co.

Asclepias perennis Walt. Corning, Clay Co.

Asclepias purpurascens L. 12648 Mena, Polk Co.

Acerates floridana (Lam.) Hitchc. 25018 Hazen, Prairie Co.

Convolvulaceae:

Cuscuta cuspidata Engelm. 16322 Fulton, Hempstead Co.

Ipomoea hederacea (Walt.) Chapman. 8111 Gifford, Hot Springs Co.

Polemoniaceae:

Phlox bifida Beck. War Eagle Creek near Huntsville, Madison Co.

Hydrophyllaceae:

Nemophila phacelioides Nutt. Wheeler and Johnson, Washington Co.; Hot Springs, Garland Co.

Boraginaceae:

Onosmodium occidentale Mackenzie. 8039 Fulton, Hempstead Co.; Baxter Mountain, Washington Co.

Onosmodium subsetosum Mack. & Bush. 6041a Northfork, Baxter Co.

Verbenaceae:

Verbena Drummondii (Lindl.) Baxt. Savoy, Washington Co.

Verbena Lambertii Sims. Son's Chapel, Washington Co.

Labiatae:

Satureja glabella (Michx.) Briquet. (*Clinopodium glabellum* Kuntze). West Fork, Washington Co., on calcareous outcrops.

Lamium purpureum L. Fayetteville, Washington Co. Introduced.

Monarda citriodora Cerv. Sulphur Springs, Benton Co.

Perilla frutescens (L.) Britton. 4437 Eureka Springs, Carroll Co.; Monte Ne, Benton Co.; Crowley's Ridge, near Forrest City, St. Francis Co. (Roland M. Harper).

Salvia azurea Lam. 451 McNab, Hempstead Co.

Salvia lanceifolia Poir. 4485 Eureka Springs, Carroll Co.

Solanaceae:

Datura Metel L. Egger, Polk Co. (R. H. Rosen). Introduced.

Physalis missouriensis Mack. & Bush. 6955 Fulton, Hempstead Co.

Bouchetia anomala (Miers) Britt. & Rusby. Summers, Washington Co., prairie glades.

Solanum elaeagnifolium Cav. 338 Texarkana, Miller Co.; Fayetteville, Washington Co.

Solanum Torreyi Gray. 23009 Pinnacle, Pulaski Co.

Scrophulariaceae:

Agalinis fasciculata (Ell.) Raf. 8464 Gifford, Hot Springs Co.; 8472 Gum Springs, Clark Co.

Buchnera elongata Sw. Prairies of Arkansas, coastal plain (Roland M. Harper).

Aureolaria grandiflora var. *serrata* (Torr.) Pennell. (*Dasystoma serrata* Small) 10603 Washington, 8977 McNab, Hempstead Co.

Linaria Cymbalaria (L.) Mill. Kenilworth Ivy. Fayetteville, Washington Co. Occasionally escaped.

Paulownia tomentosa (Thunb.) Steud. 10527 Ft. Lynn, Miller Co.; Monticello, Drew Co.; Hot Springs, Garland Co. Escaped from cultivation.

Pentstemon arkansanus Pennell. 8143 Little Rock, Pulaski Co.; 24556 Hot Springs, Garland Co.; 25167 Shirley, Van Buren Co.

Scrophularia neglecta Rydb. 12687 McNab, Hempstead Co.

Veronica arvensis L. Fayetteville, Washington Co. and throughout the state.

Veronica serpyllifolia L. Withrow Springs, Madison Co.

Veronica Tournefortii C. C. Gmel. Fayetteville, Washington Co., University of Arkansas campus.

Orobanchaceae:

Orobanche ludoviciana Nutt. (*Myzorrhiza ludoviciana* Rydb.) Kingdon Springs, Marion Co. (Roy Morrow).

Rubiaceae:

Cephalanthus occidentalis var. *pubescens* Raf. Fulton, Hempstead Co.; Hot Springs, Garland Co.

Galium tinctorium L. 6083 Corning, Clay Co.

Houstonia lanceolata (Poir.) Britton. Lee Co. (C. Woolsey).

Caprifoliaceae:

Lonicera japonica Thunb. Japanese Honeysuckle. Escaped in all parts of state and often becoming troublesome. Naturalized from Asia.

Sambucus canadensis var. *submollis* Rehder. 22295 McNab, Hempstead Co.

Viburnum affine Bush. Ozark region, on rocky cliffs.

Dipsacaceae:

Dipsacus sylvestris Huds. Teasel. Washington and Benton Counties. Introduced in waste places.

Cucurbitaceae:

Cucurbita foeditissima H. B. K. (*Pepo foetidissima* Britton) Washington and Benton Counties.

Echinocystis lobata Michx. *Micrampelis lobata* Greene) Washington Co.

Lobeliaceae:

Lobelia spicata var. *hirtella* (Ell.) Gray. 4407 Eureka Springs, Carroll Co.

Campanulaceae:

Sphenoclea zeylanica Gaertn. Lonoke, Lonoke Co.; Stuttgart, Arkansas Co. An introduced annual weed of rice fields.

Compositae:

Artemisia annua L. 4732 Cotter, Baxter Co.

Aster lateriflorus (L.) Britton. 26670 Helena, Phillips Co.

Aster ericoides L. 4510 Eureka Springs, Carroll Co.

Aster ericoides var. *pilosus* (Willd.) Porter. 6812 Fulton, Hempstead Co.; 6883 Eureka Springs, Carroll Co.

Aster salicifolius Lam. 8981 Fulton, Hempstead Co.

Aster subsessilis Burgess. Benton County (type locality, E. N. Plank).

Aster Tradescantii L. 4491 Eureka Springs, Carroll Co.; Moark, Clay Co.

Bidens discoidea (T. & G.) Britton. 26733 McNab, Hempstead Co.

Brauneria pallida (Nutt.) Britton. 25022 Hazen, Prairie Co.; Savoy, Washington Co. Common in Ozark region.

Cacalia similis (Small) new comb. (*Mesadenia similis* Small.) Benton Co. (type locality, E. N. Plank); Savoy, Washington Co.

Chrysopsis mariana (L.) Ell. Southeast Arkansas (County Agric. Agent).

Chrysopsis microcephala Small. 6847 Columbus, Washington Co.

Cirsium horridulum Michx. 24977 Fulton, Hempstead Co.

Coreopsis lanceolata var. *villosa* Michx. (C. *crassifolia* Ait.) 26889 Lawrence, Garland Co.; 27056 Berryville, Carroll Co.

Coreopsis pubescens Ell. Savoy, Greenland, Washington Co.; 4490 Beaver, 6350 Eureka Springs, Carroll Co.; Harrison, Boone Co.

Eupatorium incarnatum Walt. 4766 Cotter, Marion Co.; 14626 Texarkana, Miller Co.

Erigeron quercifolius Lam. Screeton, Prairie Co. (Roland M. Harper).

Gaillardia lutea Greene. 10596 Washington, Hempstead Co.

Helenium campestre Small. Little Rock, Pulaski Co. (type locality, coll. by Hasse, 1885); Conway, Faulkner Co. (H. E. Wheeler).

Helianthus divaricatus L. 12631 Mena, Polk Co. 26444 Magazine Mountain, Logan Co.; 29445 McNab, Hempstead Co.

Helianthus heterophyllus Nutt. 6979 Heber Springs, Cleburne Co.

Hymenopappus carolinensis (Lam.) Porter. 27052 Berryville, Carroll Co.

Lactuca canadensis L. Fayetteville, Washington Co.

Lactuca scariosa var. *integrata* Gren. & Godr. Common over entire state.

Liatris squarrosa var. *intermedia* (DC.) T. & G. 23061 Hot Springs, Garland Co.

Matricaria suaveolens (Pursh.) Buchenau. Fayetteville, Wheeler, Washington Co. Introduced.

Mikania scandens (L.) Willd. St. Francis River Swamps (S. M. Coulter).

Parthenium hispidum Raf. (*Parthenium repens* Eggert). 5591 Beaver, 27059 Berryville, Carroll Co.

Pluchea petiolata Cass. 314 Texarkana, Miller Co.; 4756 Cotter, Marion Co.

Verbesina virginica L. 274 Rich Mountain (at summit), Polk Co.

Lepachys columnaris (Sims) T. & G. Prairie Grove, Washington Co.; 8024 Fulton, Hempstead Co.; 8216 Benton, Saline Co.

Rudbeckia Brittonii Small. Fayetteville, Washington Co.

Senecio obovatus var. *rotundus* Britton. 7201 McNab, Hempstead Co.; 26866 Hot Springs, Garland Co.; 24444 Little Rock, Pulaski Co.

Senecio plattensis Nutt. Prairie, near Hazen, Prairie Co. (fide J. M. Greenman). A noxious weed.

Silphium Gatesii Small. 8048 McNab, Hempstead Co.

Solidago amplexicaulis T. & G. 434 McNab, Hempstead Co.

Solidago caesia var. *axillaris* (Pursh.) Gray 6930 Jasper, Newton Co.

Solidago celtidifolia Small. 8461 Gifford, Hot Springs Co.

Solidago arguta Ait. 26430 Magazine Mountain, Logan Co.

Solidago hispida Muhl. 6912 Harrison, Boone Co.; 26464 Lonsdale, Garland Co.

Solidago juncea Ait. 547 McNab, Hempstead Co.; 4401, 4368 Eureka Springs, Carroll Co.

Solidago latifolia L. (*Solidago flexicaulis* L.) 4554 Eureka Springs, Carroll Co.; 4779 Cotter, Marion Co.

Solidago Lindheimeriana Scheele. 20482 Eureka Springs, Carroll Co.

Solidago pendula Small. Benton Co. (Type locality, collected by E. N. Plank.)

Spilanthes americana var. *repens* (Walt.) A. H. Moore. (*Spilanthes repens.* Michx.) 6085 Corning, Clay Co.

Sonchus asper (L.) Hill. Lonoke and Arkansas Counties in rice fields; Conway, Faulkner Co.; Fayetteville, Washington Co.

Sonchus oleraceus L. Fayetteville, Washington County and elsewhere (a common weed).

Tragopogon porrifolius L. Fayetteville, Washington Co. (as a weed).

Taraxacum erythrospermum Andrz. Conway, Faulkner Co.

Vernonia missurica Raf. 300 Texarkana, Miller Co.

Xanthium glabratum (DC.) Britton. 316 Texarkana, Miller Co.

EXPLANATION OF PLATE

Plate VI

Upper: Scouring Rushes *(Equisetum praealtum)* along railway embankment near Palarm, Pulaski Co. (H. E. Wheeler.)

Lower: Arrow Leaf *(Sagittaria latifolia)* border of pond near Conway, Faulkner Co.

EXPLANATION OF PLATE

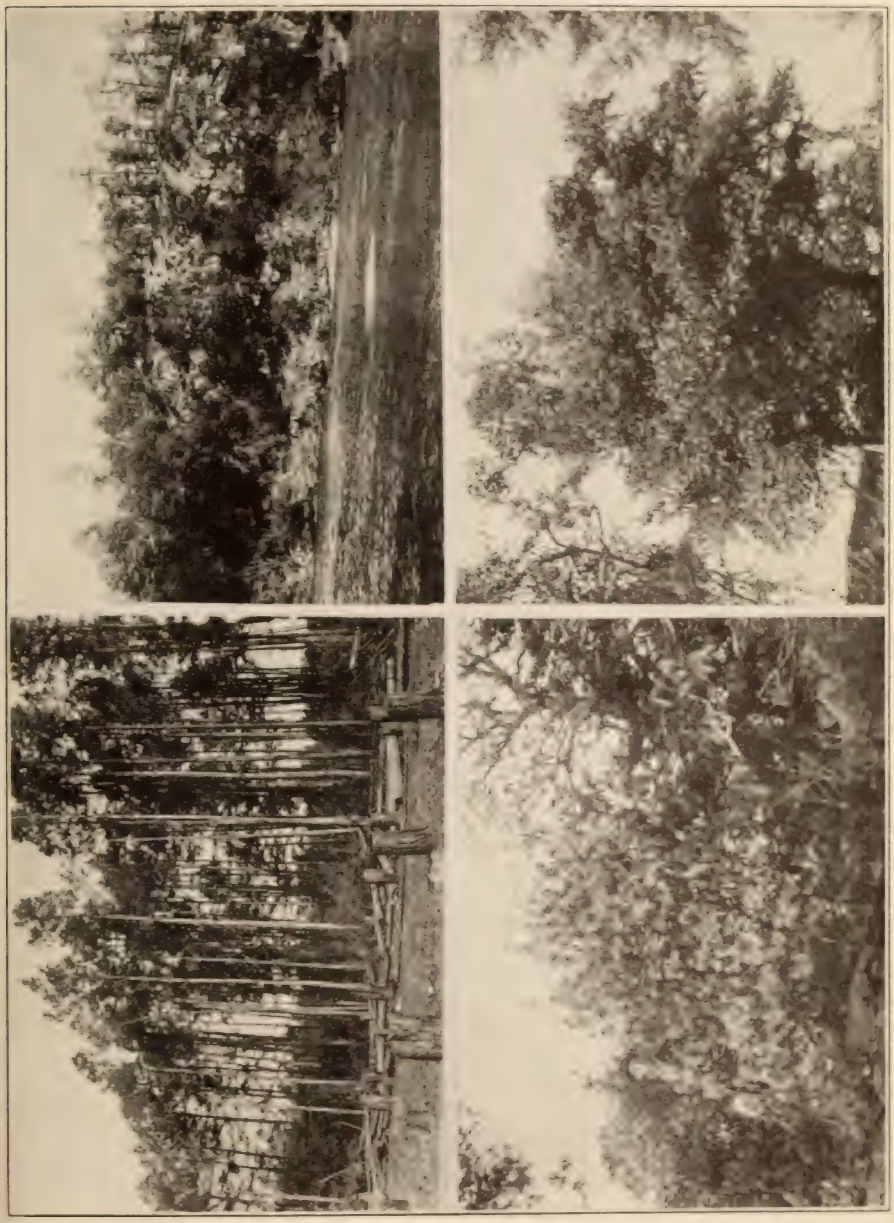
Plate VII

Upper left: Short Leaf Pine *(Pinus echinata)* in characteristic stand, about 25 years old. Butterfield, Ark.

Upper right: Same growing on quartzite hills along Ouachita River, Garland Co.

Lower left: Fringe Tree or Old Man's Beard *(Chionanthus virginica)* top of Magazine Mountain, Logan Co.

Lower right: Southern Buckthorn *(Bumelia lycoides)*, Crowley's Ridge, near Helena, Phillips Co.



EXPLANATION OF PLATE

Plate VIII

Left: Texan Saxifrage *(Saxifraga texana)* probably the earliest spring flower, appearing late in February, Conway, Faulkner Co. x ½.

Middle: A very rare Wake Robin *(Trillium pusillum)* appearing in April in oak woods on flinty soil. Tontitown, Washington Co. x ⅓.

Right: False Aloe *(Agave virginica)* flowering in June, near Fayetteville, Washington Co.

EXPLANATION OF PLATE

Plate IX

Upper left: Indian Plantain *(Cacalia tuberosa)* near Imboden.

Upper right: Fly Poison *(Amianthium muscaetoxicum)* near Imboden, Lawrence Co. (H. E. Wheeler.)

Lower left: Large tree of the Ozark Chinquapin *(Castanea ozarkensis)* near Farmington, Washington Co.

Lower right: Bark of Ozark Chinquapin, same tree as above.

EXPLANATION OF PLATE

Plate X

Upper left: Blue-fruited Hawthorn *(Crataegus brachyacantha)* near Texarkana, Miller Co.

Upper right: Bark of same.

Below: Field of Spider Lilies *(Hymenocallis occidentalis and Iris)* in a marsh near Palarm, Pulaski Co. (H. E. Wheeler.)

EXPLANATION OF PLATE

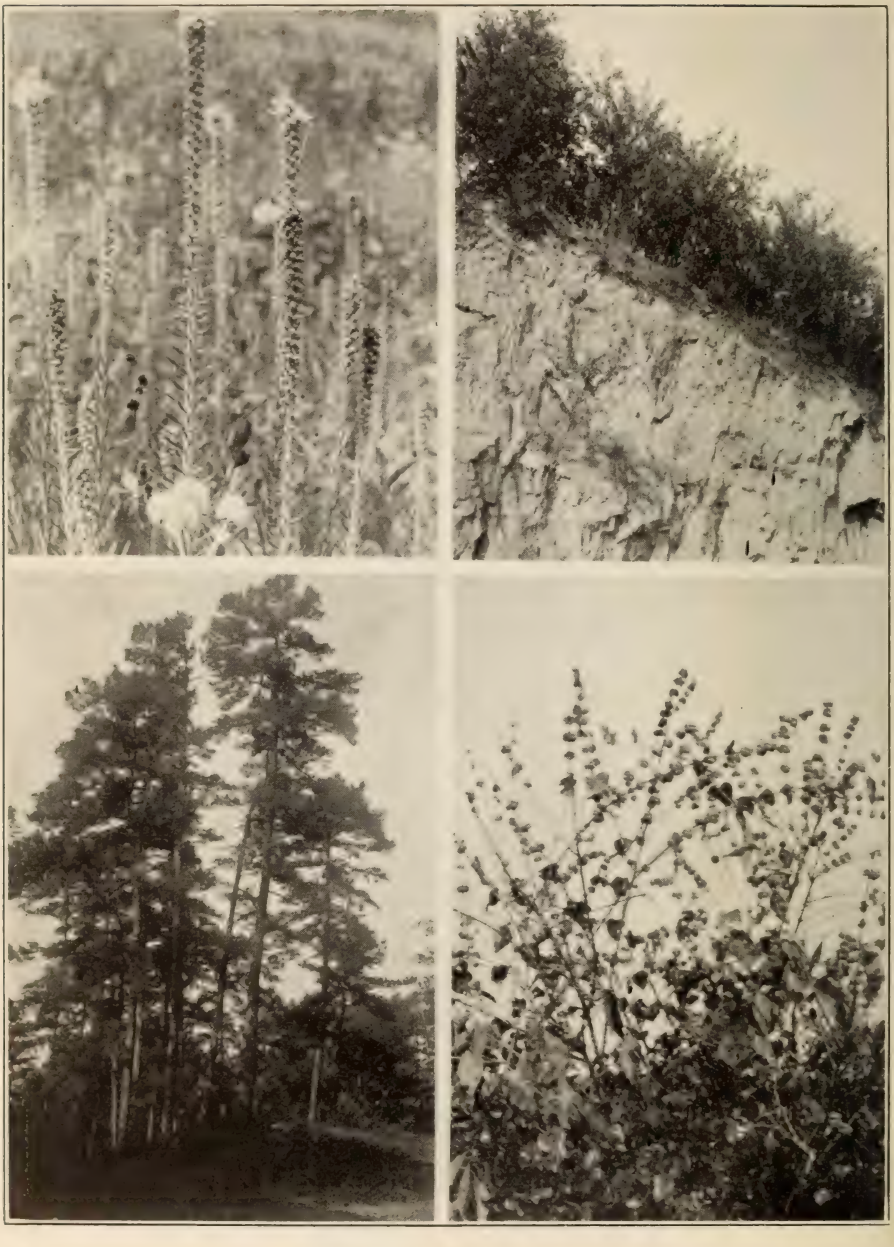
Plate XI

Upper left: Honey Locust *(Gleditsia triacanthos)* near Helena, Phillips Co.

Upper right: Bark of same.

Lower left: White Ash *(Fraxinus americana)* growing from opening in trunk of hollow Post Oak *(Quercus stellata)* Fulton, Hempstead Co.

Lower right: Azalea *(Rhododendron canescens)* in April near Hot Springs.



EXPLANATION OF PLATE

Plate XII

Upper left: Blazing Star *(Liatris elegans)* and Button Snakeroot *(Eryngium yuccaefolium)* in a meadow near Palarm, Pulaski Co.

Upper right: Chicasaw Plum *(Prunus angustifolia)* growing on loess hills, Helena, Phillips Co.

Lower left: Short Leaf Pine *(Pinus echinata)* West Mountain, Hot Springs.

Lower right: French Mulberry *(Callicarpa americana)* a shrub with brilliant lavender colored berries in autumn. Helena, Phillips Co.

EXPLANATION OF PLATE

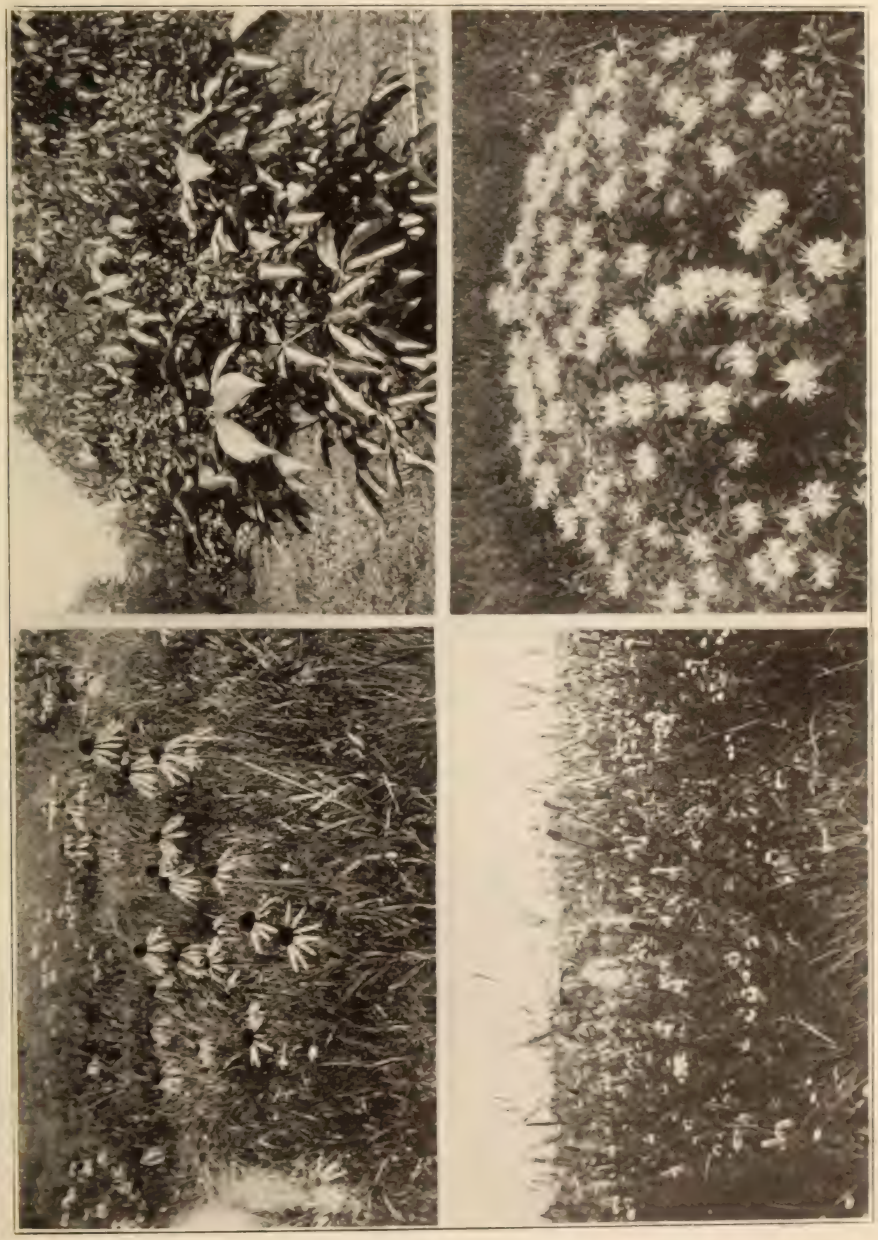
Plate XIII

Upper left: Cone Flower *(Brauneria pallida)* in a meadow in May, Washington Co.

Upper right: Red Buckeye *(Aesculus discolor* var. *mollis)* flowering in May, Central Arkansas.

Lower left: Prairie Clover *(Petalostemon purpureum)* in June, Northwest Arkansas.

Lower right: Rough Bergamot *(Monarda scabra)* Arkansas border and Southwestern Missouri in June.



BIBLIOGRAPHY ON FLORA OF ARKANSAS.

(Chronological)

1. Bradbury, John. Travels in the interior of North America in the years 1809, 1810, 1811. Liverpool, 1817. (Mentions several plants from "Upper Louisiana" and Great Prairie, probably in Arkansas, seen on trip down Mississippi River.

2. Schoolcraft, Henry R. Journal of a tour into the interior of Missouri and Arkansas. (1818-1819). London (Phillips). 1821.

3. Nuttall, Thos. Journal of travels into Arkansas territory during the year 1819, with occasional observations on the manners of the aborigines. pp. 236. Phila. 1821.

4. ——— A description of some new species of plants recently introduced into the gardens of Philadelphia from the Arkansas territory. Journal Philadelphia Academy of Science. 2:114-23; Phila. 1821. (Includes description of twelve species of Arkansas plants.)

5. ——— Description of two new genera of the natural order Cruciferae. Journal Philadelphia Academy of Science, 5:132-35. 1825. (Described: *Selenia aurea* Nutt. and *Strepthanthus maculatus* Nutt.) Plates 6-7.

6. Featherstonehaugh, G. W. Geological report of an examination made in 1834 of the elevated country between the Missouri and Red Rivers. Ex-Doc. No. 151, 23d Cong. 2nd Sess. Vol. IV. 97 pages. Washington (Gates and Seaton). 1835.

7. Nuttall, Thos. Collections towards a flora of the territory of Arkansas. Trans. Am. Phil. Soc. (New Series) 2:139-202. Phila. 1837.

8. Lesquereux, Leo. Botanical and paleontological report on the geological state survey of Arkansas. Rep. Second Geol. Surv. of Ark. pp. 295-399. Phila. 1860.

9. Butler, Geo. D. Additions to the flora of Arkansas. Bot. Gaz. 2:104. 1877.

10. Harvey, F. L. Asplenium Bradleyi. Bot. Gaz. 5:15. 1880.

11. ——— Some Arkansas ferns. Bot. Gaz. 5:39. 1880.

12. ——— Early plants. Bot. Gaz. 5:56. 1880.

13. (Coulter, J. M.) Southwestern plants. Bot. Gaz. 5:84. 1880.

14. Harvey, F. L. Notes from Arkansas. Bot. Gaz. 5:91-3. 1880.

15. ——— Distribution of Nymphaceae in Arkansas. Bot. Gaz. 5:139-40. 1880.

16. Warder, John A. Notes from Arkansas. Bot. Gaz. 6:188. 1880.

17. Harvey, F. L. Ferns of Arkansas. Bot. Gaz. 6:189-90. 1880.

18. ——— Ferns of Arkansas. Bot. Gaz. 6:213-15. 1880.

19. ——— Some Arkansas Trees. Bot. Gaz. 6:215. 1880.

20. ——— Leavenworthia in S. W. Missouri and N. W. Arkansas. Bot. Gaz. 6:230. 1880.

21. ——— The flora of Arkansas. Am. Nat. 15:388-89. 1881.

22. ——— Forest Notes. Bot. Gaz. 6:273. 1881.

23. ——— A second Spring in Arkansas. Bot. Gaz. 7:12. 1882.

24. ——— Selenia aurea. Bot. Gaz. 7:57. 1882.

25. ——— Forestry Notes. Bot. Gaz. 8:355-56. 1883.

26. ——— Carya myristicaeformis. Bot. Gaz. 9:195. 1884.

27. ——— Dioclea Boykinii. Bot. Gaz. 9:196. 1884.

28. ——— Notes on forest trees. Bot. Gaz. 10:279-80. 1885.

29. ——— Some abnormal Rudbeckias. Bot. Gaz. 10:296. 1885.

30. Sargent, C. S. Report on the forests of North America (exclusive of Mexico). 10th U. S. Census (Arkansas) 9:543-4. Washington. 1884.

31. ——— Map of Arkansas showing the distribution of the forests. 10th U. S. Census. l. c.

32. Harvey, F. L. Arboreal flora of Arkansas. Amer. Jour. Forestry. 1:413-24 and 451-58. June-July. 1883.

33. Call, R. Ellsworth. Notes on the native forest trees of eastern Arkansas. Proc. Ia. Acad. Sci. 76-85. 1887-89.

34. (Branner, J. C.) Flora of Arkansas with additions by W. S. Blatchley, 1889, and index; also notes of others added at various times. Manuscript in University of Arkansas library. (No date.)

35. Branner, J. C. and F. V. Coville. A list of the plants of Arkansas. Annual Report for 1888. Arkansas Geol. Survey, 4:155-242. Little Rock. 1891.

36. Coville, F. V. Notes on the Botany of Arkansas. Annual Report for 1888 Arkansas Geol. Survey, 4:243-252. Little Rock.

37. Call, R. Ellsworth. Notes on the forest trees of the Crowley's Ridge region. Annual Report for 1889 Arkansas Geol. Survey, 2:183-202. Little Rock.

38. Williams, J. Francis. Distribution of timber and its relation to the underlying rock formations. (Magnet Cove region.) Annual Report for 1889, Part 2. (Igneous Rocks) Arkansas Geol. Survey for 1890. 2:167-170. Little Rock.

39. Harvey, F. L. Varieties of Ranunculus abortivus L., Bull. Torrey Bot. Club. 19:93-94. March, 1892.

40. Bush, B. F. Botany of some southern swamps. Garden and Forest 10:514-16, Dec. 1897.

41. Plank, E. N. Concerning the plants of southwestern Arkansas. Plant World. 2:45-47. 1898-99.

42. Olmstead, F. E. A working plan for the forest lands near Pine Bluff, Arkansas. U. S. Bureau of Forestry Bull. 32. Washington. 1902.

43. Coulter, S. M. Ecological comparison of some typical swamp area. Fifteenth Annual Report Missouri Botanical Garden 39-71. 1904.

44. Record, Samuel J. The forests of Arkansas. For. Quart. 5:296-301. S. 1907.

45. ——— The forest resources of Arkansas. Mo. Pac. Land Office, Little Rock. 1910.

46. Howell, A. H. Birds of Arkansas. Bull. No. 38, Biological Survey, U. S. Dept. Agr., Washington. 1911. (Contains several botanical notes.)

47. Harper, Roland M. Botanical evidence of the age of certain oxbow lakes. Science, N. S. 36:760-761. Nov. 29, 1912.

48. ——— Phytogeographical notes on the coastal plains of Arkansas. Plant World, 17:36-48. Feb. 1914.

49. ——— Some undescribed prairies in northeastern Arkansas. Plant World 20:58-61. Feb. 1917.

50. Sargent, C. S. Notes on North American trees. II. Carya. Bot. Gaz. 66:229-258. Sept. 1918.

51. Palmer, E. J. The forest flora of the Ozark region. Journal Arnold Arboretum 2:216-32. Apr. 1921.

52. ——— The Red River forest at Fulton, Arkansas. Journal Arnold Arboretum 4:8-33. Jan. 1923.

53. Ashe, W. W. Further notes on the trees and shrubs of southeastern United States. Bull. Torr. Bot. Club. 50:359-363.

54. ——— Notes on woody plants. Jour. Mitchell Soc. 50:43-48. Aug. 1924.

55. Palmer, E. J. The ligneous flora of Rich Mountain, Arkansas and Oklahoma. Journal Arnold Arboretum 5:108-134. Apr. 1924.

56. ——— Two interesting ferns from Arkansas. Am. Fern Jour. 14:39-41. Apr.-Jun. 1924.

57. Buchholz, John T. Notes on Arkansas Pteridophytes. Am. Fern Jour. 14:33-38. Apr.-Jun. 1924.

58. Shreve, Ralph W. Iris cristata. Flower Grower 11:301. Aug. 1924.

59. ——— Native irises of the Ozarks. Flower Grower. 11:385-386. Oct. 1924.

60. Buchholz, John T. and Wilbur R. Mattoon. Common forest trees of Arkansas. Bull. Agr. Extension Division, University of Arkansas. No. 180. Nov. 1924. (Little Rock Office.)

61. Ashe, W. W. Further notes on woody plants. Torreya, 25:10-11. Jan.-Feb. 1925.

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